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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,410	04/08/2004	Yi-Cheng Liu	252011-2200	7813
47390 7590 01/17/2008 THOMAS, KAYDEN, HORSTEMEYER & RISLEY LLP 600 GALLERIA PARKWAY, 15TH FLOOR ATLANTA, GA 30339				
EXAMINER				
SPIELER, WILLIAM				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/820,410

**Applicant(s)**

LIU, YI-CHENG

**Examiner**

WILLIAM SPIELER

**Art Unit**

4141

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 April 2004.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-20 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/ISD)  
Paper No(s)/Mail Date 03/16/2007  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Claims 1-20 are pending for examination.

#### ***Information Disclosure Statement***

2. The information disclosure statement filed on March 16, 2007 fails to comply with 37 C.F.R. 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 C.F.R. 1.56(c) most knowledgeable about the content of the information, of each patent or publication listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

#### ***Drawings***

3. The drawings filed on April 8, 2004 are accepted.

#### ***Claim Objections***

4. Claims 16-20 are objected to because of the following informality: the manner in which these claims are drafted conflates language of an apparatus claim and a method claim. Using claim 16 as an example, rewording the above claims to read like "The storage medium of claim 15, storing said computer program which, when executed, further directs a computer to perform the step of fetching the resource status data according to a fetch frequency" would defeat this objection. Appropriate correction is required.

***Claim Rejections - 35 U.S.C. § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 3, 10 and 17 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Both claims claim a "reference range." It is unclear what the references are, what they refer to, or what elements would exist in such a range. *See In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320 (Fed. Cir. 1989). Therefore, since the claims fail to distinctly claim the subject matter then the Applicant has not complied with 35 U.S.C. § 112, second paragraph.

***Claim Rejections - 35 U.S.C. § 101***

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 1-7 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. The language of the claims raise a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, and tangible result to form

the basis of statutory subject matter under 35 U.S.C. § 101.

***Claim Rejections - 35 U.S.C. § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1, 3, 6, 8, 10, 13, 15, 17 and 20 are rejected under 35 U.S.C. § 102(b) as being anticipated by Butt et al., U.S. Patent No. 5,889,944 (hereinafter "Butt").

***As per claim 1, Butt teaches:***

a plurality of configurations comprising at least one resource item and at least one process of an application system (Butt, col. 1, lines 13-14);

a fetch module to fetch resource status data of the resource item (Butt, col. 1, lines 36-37);

a timing scheduling module to determine an execution time point for the process according to the resource status data (Butt, col. 4, lines 44-51); and

a trigger module to execute the process at the execution time point for the process according to the resource status data (Butt, col. 4, lines 21-22).

***As per claim 3, Butt teaches:***

the resource status data is within a predetermined reference range (Butt, col. 1, lines 36-37; col. 4, lines 6-8; col. 4 ), where the group of local exchanges and the database among all other resources present in the system is the predetermined reference range as claimed.

***As per claim 6, Butt teaches:***

the fetch module further fetching the resource status data of the resource after the process is executed (Butt, col. 1, lines 36-37; col 5, lines 1-2), where JBM is the fetch module as claimed.

***Claim 8*** is the method claim corresponding to the system claim of claim 1 and is rejected for the same reasons as claim 1.

***Claim 10*** is the method claim corresponding to the system claim of claim 3 and is rejected for the same reasons as claim 3.

***Claim 13*** is the method claim corresponding to the system claim of claim 6 and is rejected for the same reasons as claim 6.

***Claim 15*** is the apparatus claim corresponding to the system claim of claim 1 and is rejected for the same reasons as claim 1.

***Claim 17*** is the apparatus claim corresponding to the system claim of claim 3 and is rejected for the same reasons as claim 3.

***Claim 20*** is the apparatus claim corresponding to the system claim of claim 6 and is rejected for the same reasons as claim 6.

***Claim Rejections - 35 U.S.C. § 103***

11. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 2, 9 and 16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Butt et al., U.S. Patent No. 5,889,944 (hereinafter "Butt") in view of Jindal et al., U.S. Patent No. 6,327,622 (hereinafter "Jindal").

***As per claim 2***, Butt does not specifically teach a fetch frequency according to which the fetch module fetches the resource status data. The analogous art of Jindal, however, does. (Jindal, col. 13, lines 14-18).

Therefore it would have been obvious to one of the ordinary skill in the art at the time of invention was made to incorporate the teaching of Jindal into the system of Butt as a practical means of scheduling resource polling by the fetch module.

***Claim 9*** is the method claim corresponding to the system claim of claim 2 and is rejected for the same reasons as claim 2.

***Claim 16*** is the apparatus claim corresponding to the system claim of claim 2 and is rejected for the same reasons as claim 2.

13. Claims 4, 11 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Butt et al., U.S. Patent No. 5,889,944 (hereinafter "Butt") in

view of Yamagashi, U.S. Patent No. 5,870,604 (hereinafter "Yamagashi").

**As per claim 4**, Butt does not specifically teach the resource item being a central processing unit (CPU) of the system nor does it teach CPU use rate as resource status data. The analogous art of Yamagashi, however, does. (Yamagashi, col. 4, lines 43-46).

Therefore it would have been obvious to one of the ordinary skill in the art at the time of invention was made to incorporate the teaching of Yamagashi into the system of Butt as a means to implement a load-balancing means.

**Claim 11** is the method claim corresponding to the system claim of claim 4 and is rejected for the same reasons as claim 4.

**Claim 18** is the apparatus claim corresponding to the system claim of claim 4 and is rejected for the same reasons as claim 4.

14. Claims 5, 12 and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Butt et al., U.S. Patent No. 5,889,944 (hereinafter "Butt") in view of Aref et al., U.S. Patent No. 6,023,720 (hereinafter "Aref").

**As per claim 5**, Butt does not specifically teach the resource item being a disk of the system nor does it teach disk use rate as resource status data. The analogous art of Aref, however, does. (Aref, col. 5, lines 26-35).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention was made to incorporate the teaching of Aref into the system of Butt as a means to enhance utilization of available disk bandwidth while (minimiz[ing] the amount of disk reads that do not meet their presentation



deadlines, and [] avoid[ing] indefinite postponement and large buffer sizes in the case of disk writes.” (Aref, col. 1, lines 53-60).

**Claim 12** is the method claim corresponding to the system claim of claim 5 and is rejected for the same reasons as claim 5.

**Claim 19** is the apparatus claim corresponding to the system claim of claim 5 and is rejected for the same reasons as claim 5.

15. Claims 7 and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Butt et al., U.S. Patent No. 5,889,944 (hereinafter “Butt”) in view of Bigus, U.S. Pat. No 5,442,730 (hereinafter “Bigus”).

**As per claim 7**, Butt does not teach the use of a neural network model to determine the execution time point. The analogous art of Bigus, however, teaches the use of a neural network to schedule jobs for execution. (Bigus, col. 7, lines 60-62). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Bigus into the system of Butt as a means to provide an enhanced means for scheduling resources for a plurality of jobs. (Bigus, col. 2, lines 64-66).

**Claim 14** is the method claim corresponding to the system claim of claim 7 and is rejected for the same reasons as claim 7.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM SPIELER whose telephone number

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is (571)270-3883. The examiner can normally be reached on Monday to Thursday, 9:30 AM - 3:00 PM Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chameli Das can be reached on (571) 270-1392. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William Spieler/  
Patent Examiner, AU 4141  
January 3, 2008

/CHAMELI C. DAS/  
Supervisory Patent Examiner, Art Unit 4141